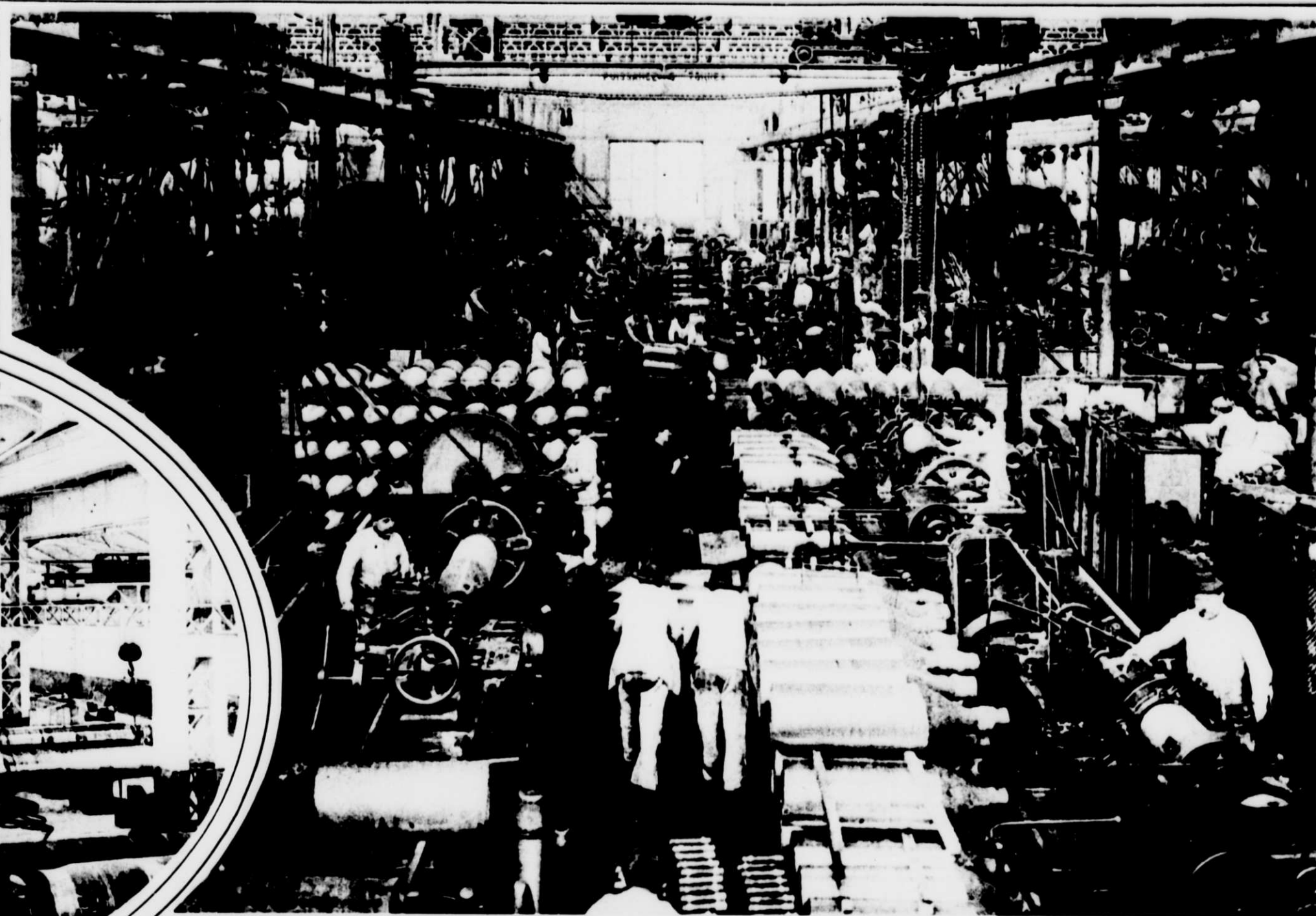


How France Has Risen to Meet Cry for Big Guns and Ammunition



TURNING OUT THOUSANDS OF SHELLS FOR THE BIG GUNS IN THE SCHNEIDER PLANT AT CREUSOT.

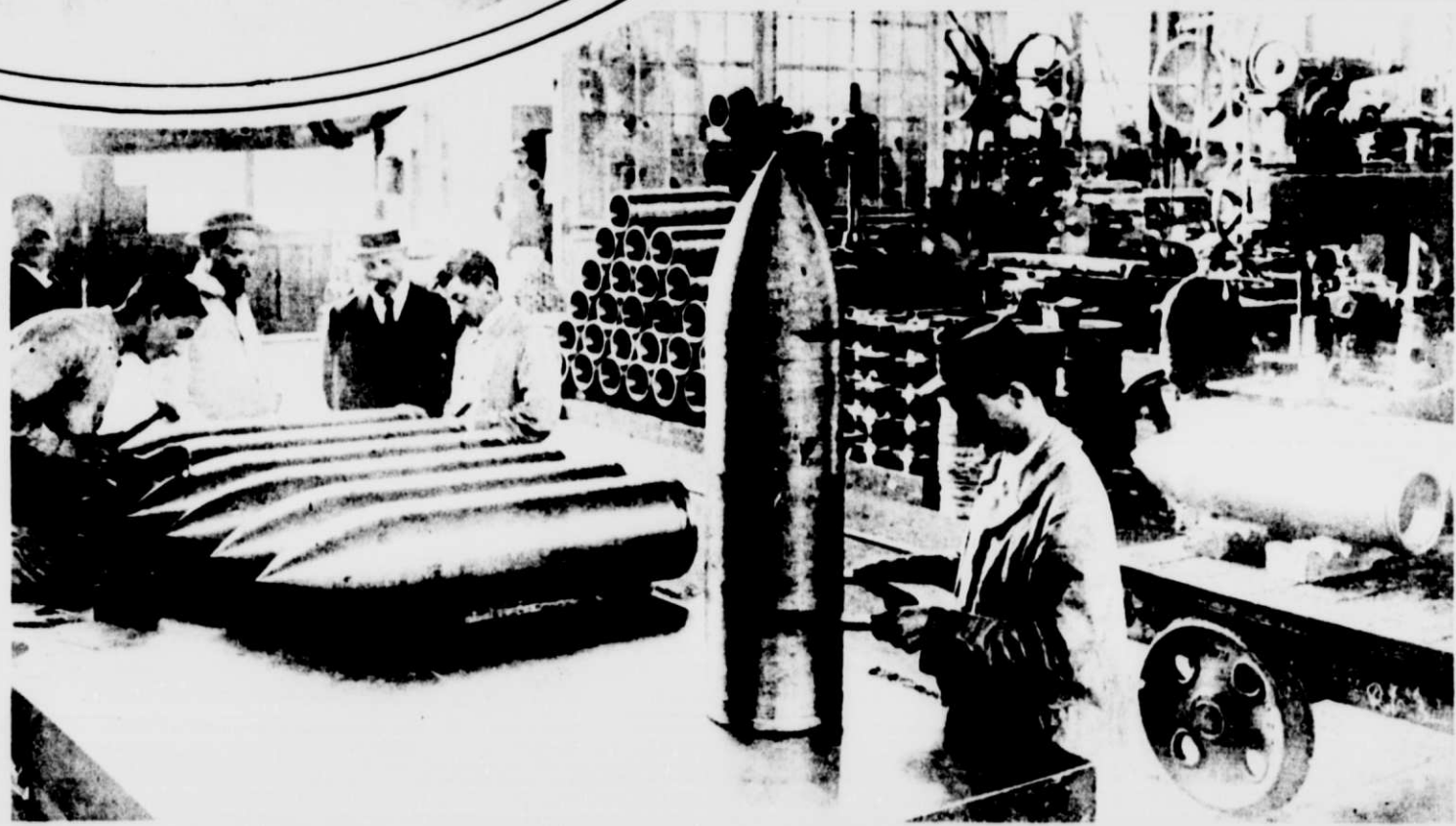
MAKING BIG GUNS IN SCHNEIDER WORKSHOPS AT CREUSOT.

Big Creusot Plant Running Night and Day to Supply Army

It has recently been asked: "What would happen to France now if some desperately determined spy succeeded in destroying the Schneider plant at Creusot? Instead of crippling factories here and there in the United States just think how much more could be accomplished in the way of hurrying the cause of the Allies if the torch were applied to the wonderful establishment in the district of Saône-et-Loire."

This is undoubtedly true, for the Creusot works are the main source of French munitions. Messrs. Schneider have artillery shops at Harfleur and Havre, but interesting and big as these are they have only a secondary standing compared with the factory at Creusot. Nor is the shipyard at Chalon-sur-Saône, vital as it is to the national defence because of the destroyers and submarines built there, so important as a military asset as the plant in question.

Originally the factory at Creusot was placed there to take advantage of the local coal supply, and the needful iron and limestone were then within easy reach in sufficient quantities. That, however, was a long time ago, and the diversified output of the Creusot works and the size of the plant today have far outgrown local resources. Coal from the near by mines is not able to supply one-quarter of the fuel needed, and iron ore has been drawn of late years from Alsace, Spain and Algiers.



EXAMINING 11 INCH SHELLS IN THE SCHNEIDER WORKSHOPS AT CHAMPAGNE-SUR-SEINE

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Curiously, with navigable water not so many miles away, the works were built without heed to this means of transportation, and it was found expedient after the original foundry came

into the control of Joseph Eugene Schneider and his brother Adolphe in 1855, to run a railroad to the Canal du Centre, and this line was later extended to reach Chalon-sur-Saône.

From a German source comes this tribute to the Creusot works, and remembering what the gigantic Krupp plant at Essen represents in the metallurgical arts and the production of war

machinery, the quotation is of great significance: "The manufacture of war materials, especially of guns and armor plate, has always been vigorously prosecuted. In this particular the Creusot works have never been surpassed; in fact, it is only fair to say that they lead the world in this field of industry."

It was at Creusot that the steam hammer was invented about the middle of the nineteenth century, and that stroke of genius made it possible to forge single pieces of previously unheard of dimensions. It was because of this that the first heavy armor plate was turned out there, and later on the wonderful turret armor for French defenses was produced. Subsequently, with the advent of steel, the hydraulic press supplanted the hammer, and now at Creusot there are shaping presses capable of squeezing into form great masses of heated steel—the biggest of these machines exerting a pressure of 10,000 tons.

The steel making plant is a splendid example of productiveness and economy combined. Normally the output of steel is in the neighborhood of 200,000 tons a year, and ingots of seventy tons in weight are made and handled with astonishing ease. Pieces of armor plate weighing from thirty to seventy-five tons each are worked into shape under the impulse of a steam engine developing 14,000 horse-power. And yet the utmost care is taken to utilize the gases from the blast furnaces and the coke ovens—some for the generation of power and some for the production of certain chemicals. Also other by-products are obtained, and these are sold to the manufacturer of fertilizer and coal tar crudes.

The Creusot plant is located in a narrow valley, which it fills from side to side for a distance of nearly three miles, and the various buildings cover an area of 150 acres. Railroad tracks run everywhere in and out of the shops, the combined trackage representing a matter of nearly 180 miles. For pulling or shifting the 5,700 cars of the company's rolling stock there are available in the neighborhood of seventy locomotives. Normally the weight of raw material worked into shape daily exceeds 9,000 tons and the peace

Efficiency the Keynote of this Famous Industrial Organization

time payroll includes more than 20,000 men. The output and the number of employees have of course been increased since the outbreak of war. This master plant has always led in the manufacture of big guns, heavy projectiles and the fabrication of large gun mounts and armor. Besides these the famous Creusot field piece, together with its carriage and limber and ammunition, is produced at this plant. But this does not cover their output. Here too are made boilers and steam engines, locomotives, steam turbines, petrol and gas engines and automobile chassis—certainly a diversified product.

Today the Creusot works are running continuously night and day, and this vast factory has done its part toward making it possible for Gen. Joffre to announce lately that France has now more munitions than she needs. Efficiency has been the keynote of the Schneider management, and the Creusot works are rightly famous for the marvelous coordination of every department, making it possible for the plant to turn out an immense volume of finished articles with a minimum of lost motion.

One thing that has contributed very largely to this state of affairs is the policy that has prevailed in creating the administrative and the industrial personnel. There has been within the factory an organized system of education that has made it easy for an ambitious youth to advance. Any boy showing special aptitude for any branch of work has been helped along to that education which would peculiarly fit him to make the most of his native talent. This in its turn has promoted a bond of interest between the artisan and his employers, and the excellence of everything produced at Creusot bears eloquent testimony to the advantages of this cooperation.

WAR'S HAND HEAVY ON THE POOR PEASANTS OF POLAND



INTERIOR OF A POLISH HUT. THOUSANDS HAVE BEEN DRIVEN FROM HOMES SUCH AS THIS DURING THE WAR.



TYPE OF POLISH PEASANT HUT. LIVING IN THIS HUT WERE SEVEN WOMEN AND TWO CHILDREN. THE MEN WERE IN THE ARMY.

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